

Williamsburg, VA Chesapeake Bay TMDL Public Meeting Summary

December 15, 2009

**2007 Legacy Hall
4301 New Town Avenue
Williamsburg, VA 23188**

Agenda	page 2
Attendee Details.....	page 3
Power Point Presentation.....	page 4
Questions Answered.....	page 31
Questions Submitted.....	page 34
Comments.....	page 35

Agenda

- **Welcome, introductions, and meeting logistics – Al Pollock, VADEQ (5 minutes)**
- **EPA presentation on the Chesapeake Bay TMDL and EPA expectations – Richard Batiuk and Bob Koroncai, EPA (40 minutes)**
- **Next steps – Rick Hill, VADCR (15 minutes)**
- **Public comments, questions and answers – Panel moderated by Al Pollock (60 minutes)**
- **Adjourn**

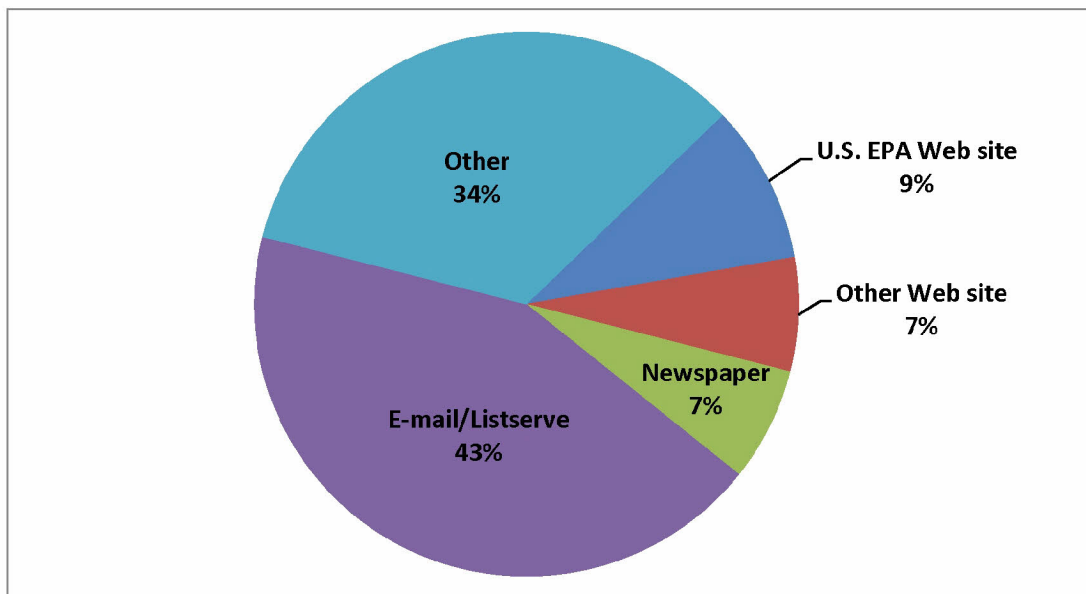
Attendee Detail

Total Live Attendees: 110

Registration Question:

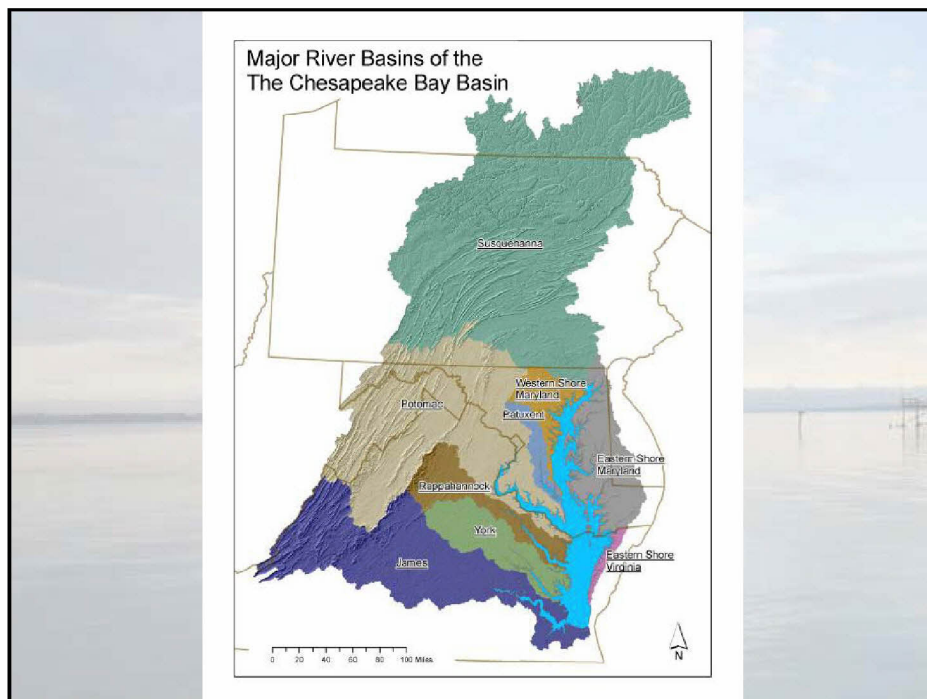
How did you hear about this Meeting?

- E-mail/Listserve (32)
- Other (25)
 - Friend (5)
 - Colleague (4)
 - County Government
 - DCR
 - Kings Point Community
 - State HBAV
 - VA Farming TV
 - VACO
 - Virginia Town Hall
 - WCAN
 - Working on TMDLs for some time, 2 years or so
- U. S. EPA Web Site (7)
- Newspaper (5)
- Other Web Site _____ (5)
 - VA Agribusiness
 - JCC



Panel to Address Public Comments

- VA Department of Environmental Quality: Al Pollock, Moderator
- EPA: Richard Batiuk
- EPA: Bob Koroncai
- VA Department of Conservation and Recreation: Rick Hill



Local Water Quality Issues

Virginia's Chesapeake Bay Watershed River Basins

- About 34% of the Bay watershed is within Virginia - over 13.8 million acres

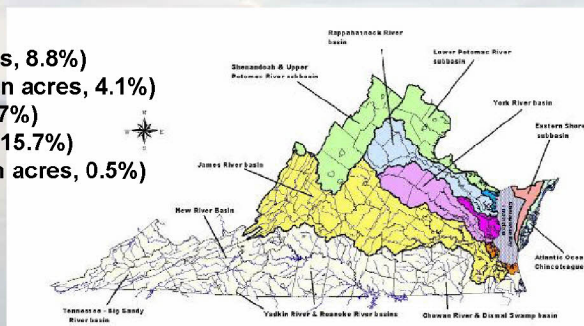
- Over 50% of Virginia drains to the Bay

- Five VA River Basins:

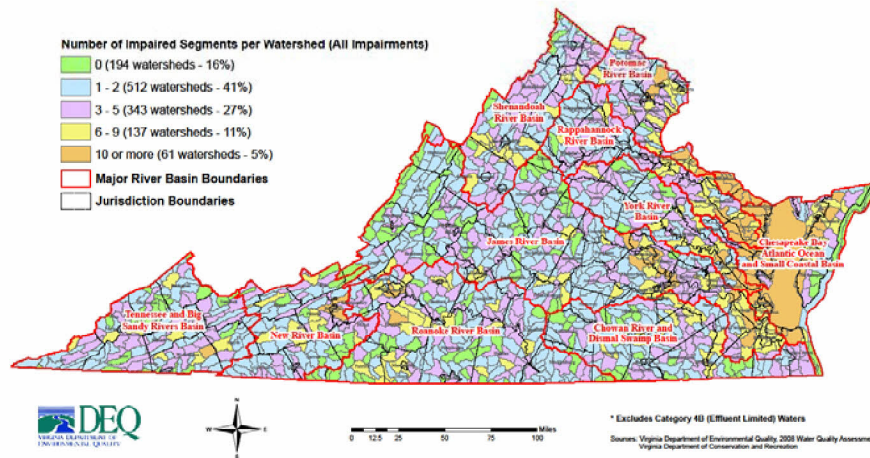
- Potomac (3.6 million acres, 8.8%)
- Rappahannock (1.7 million acres, 4.1%)
- York (1.9 million acres, 4.7%)
- James (6.4 million acres, 15.7%)
- Eastern Shore (0.2 million acres, 0.5%)

- Virginia Land Uses

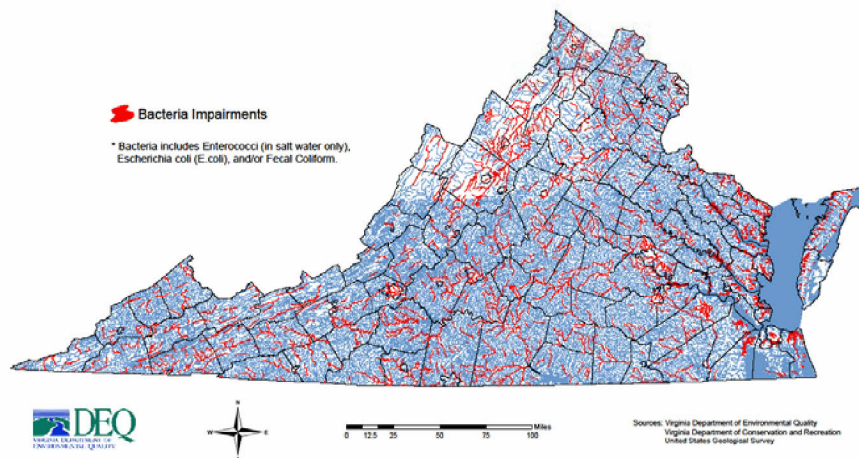
Agriculture – 22%
Urban – 12 %
Forest – 66%

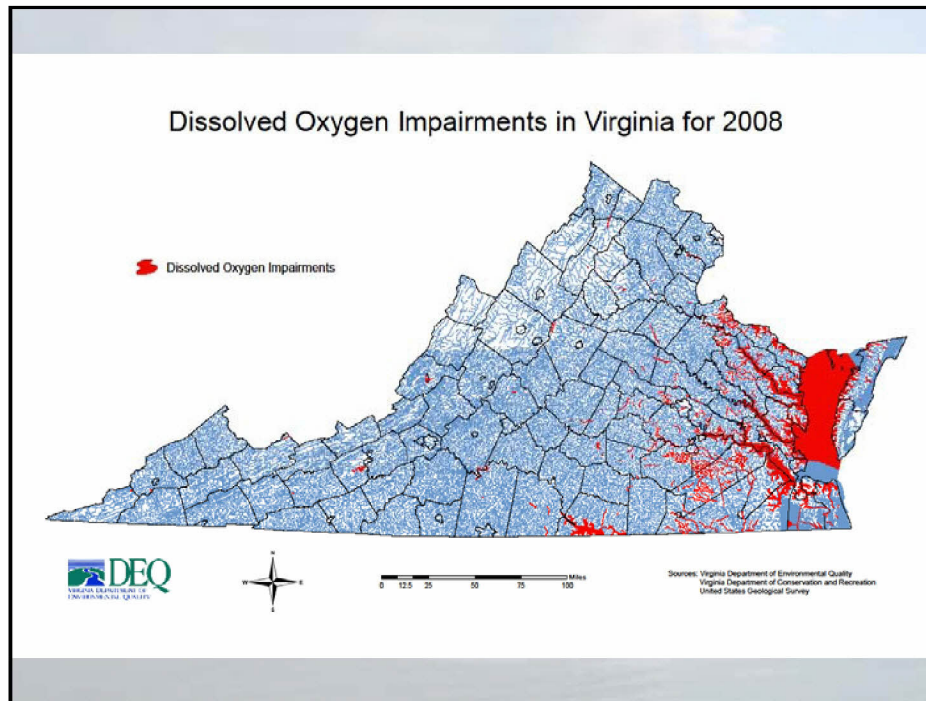


Distribution of Impaired* Waters In Virginia's Watersheds



Bacteria* Impairments in Virginia for 2008

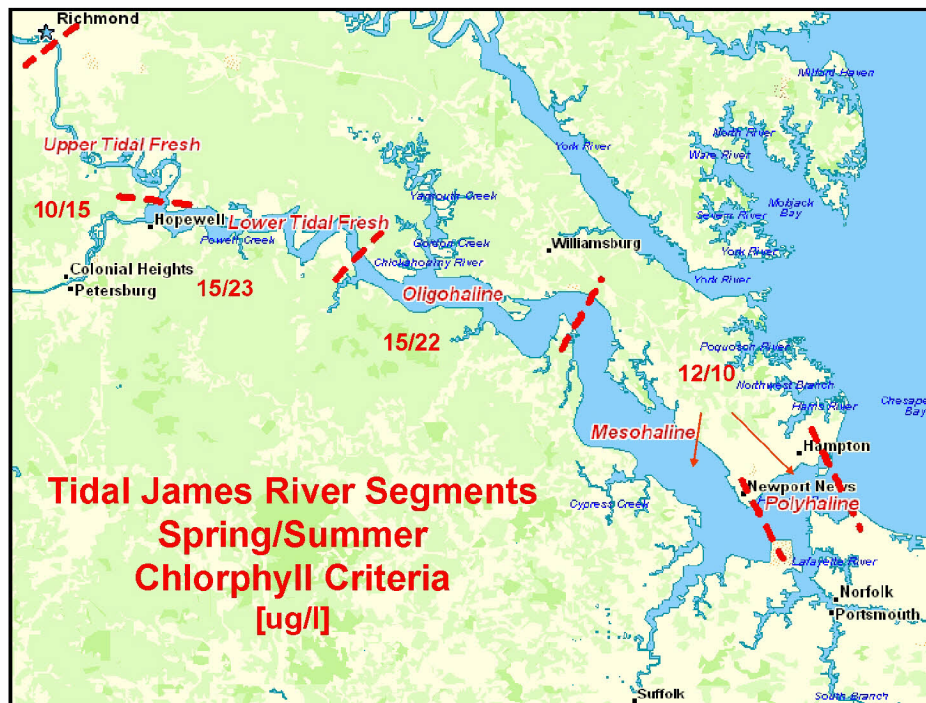




Special Case: James River

- The dissolved oxygen standards in the Bay and its tidal rivers are the basis for the working nutrient target loads being used to develop Watershed Implementation Plans in each Virginia river basin.
- However, the target loads in the James basin do not yet account for what will be needed to also meet the chlorophyll standards, which were adopted due to high algae levels in the tidal James River.





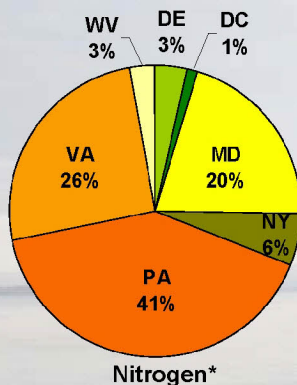
Chesapeake Bay Watershed- By the Numbers

- Largest U.S. estuary
- Six-states and DC, 64,000 square mile watershed
- 10,000 miles of shoreline (longer than entire U.S. west coast)
- Over 3,600 species of plants, fish and other animals
- Average depth: 21 feet
- \$750 million contribution annually to local economies
- Home to 17 million people (and counting)
- 77,000 principally family farms
- Declared “national treasure” by President Obama

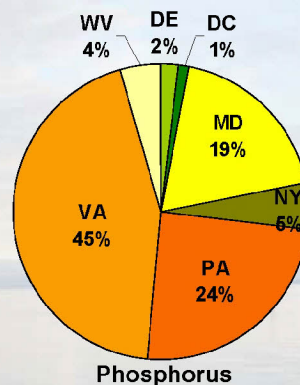


Source: www.chesapeakebay.net

Nutrient Loads by State



Nitrogen*

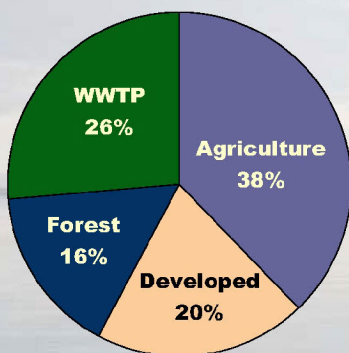


Phosphorus

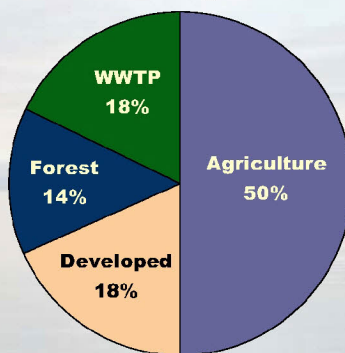
*EPA estimates a nitrogen load of 284 million lbs nitrogen in 2008. EPA assumes a reduction of 7 million lbs due to the Clean Air Act. This leaves 77 millions lbs to be addressed through the TMDL process.

Nutrient Sources of VA

Sources of Nitrogen from Virginia

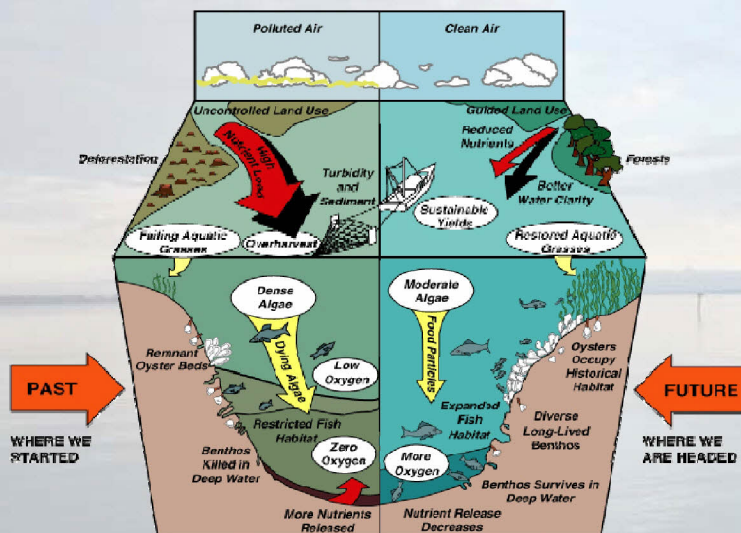


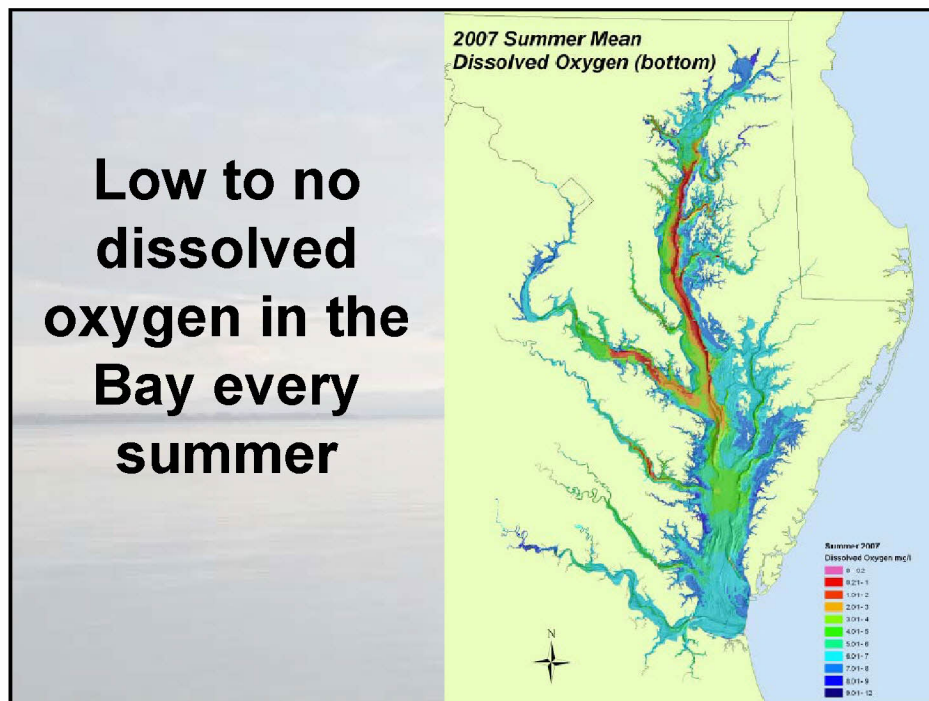
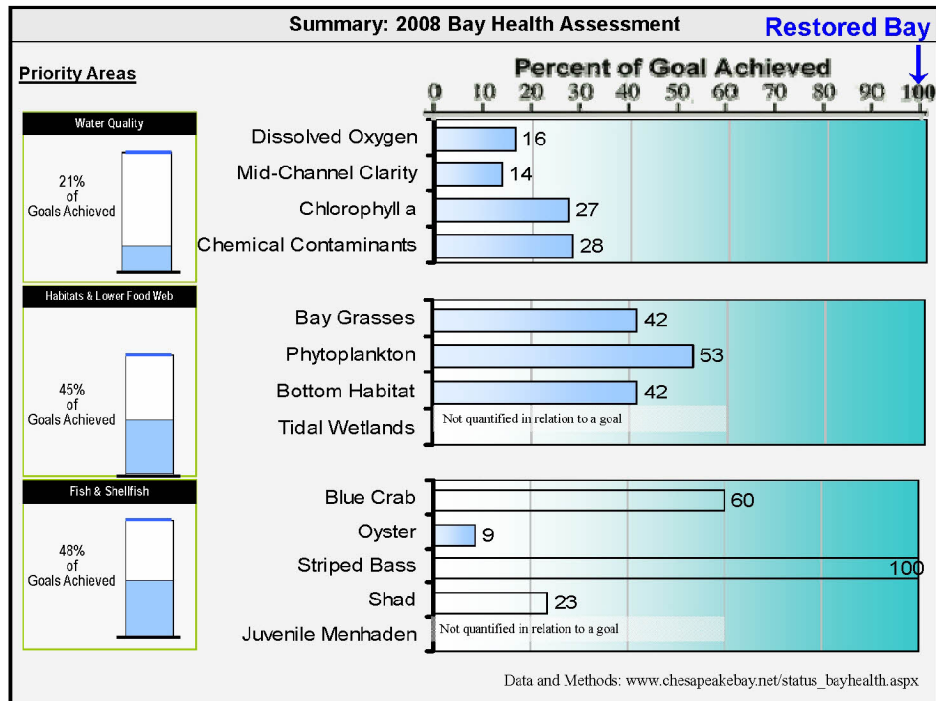
Sources of Phosphorus from Virginia



N and P values from 2008 Scenario of Phase 5.2 Watershed Model

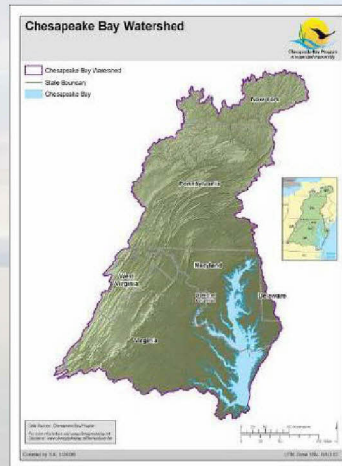
Chesapeake Bay Health- Past and Future



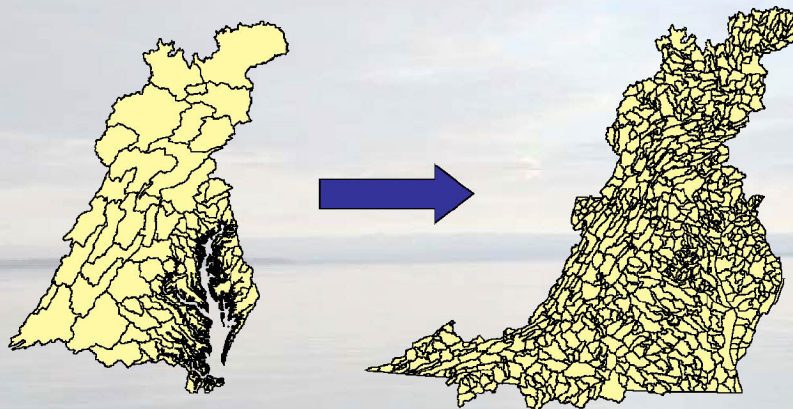


The Chesapeake Bay TMDL

- EPA sets pollution diet to meet states' Bay clean water standards
- Caps on nitrogen, phosphorus and sediment loads for all 6 Bay watershed states and DC
- States set load caps for point and non-point sources



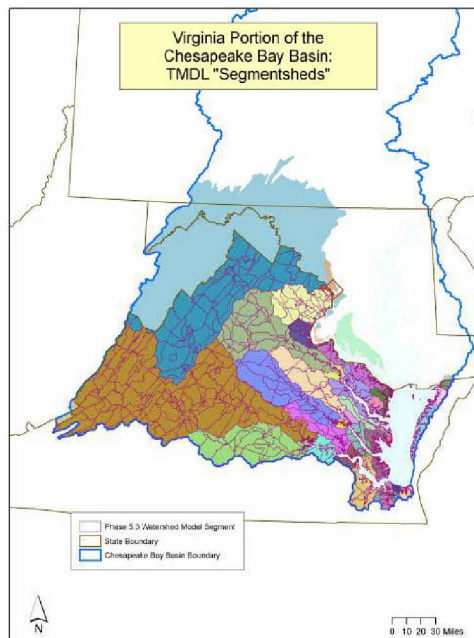
The Bay science supports local pollution diets...



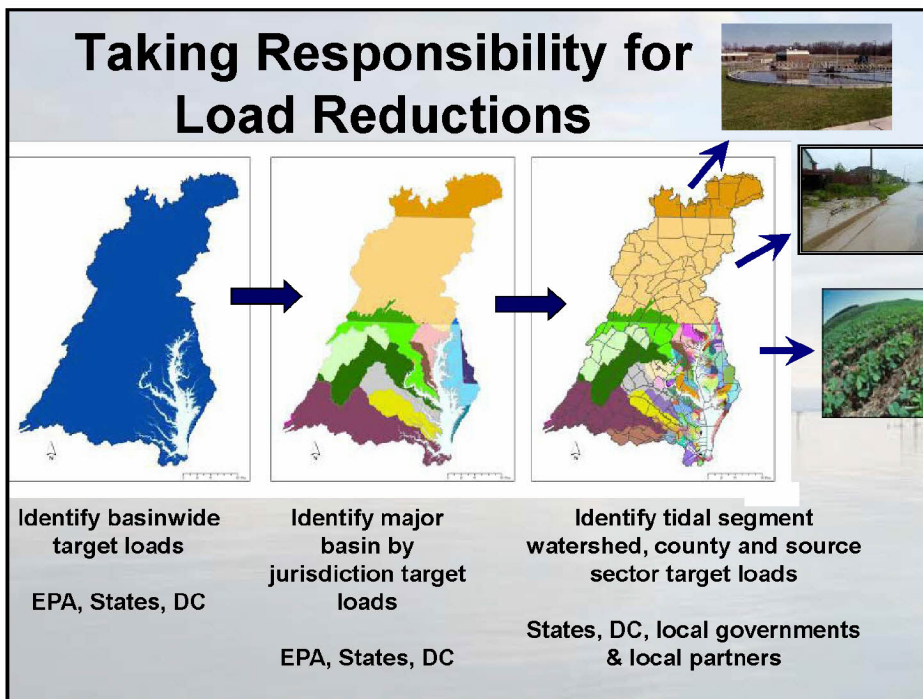
Phase 4 Bay Watershed Model
(2000-2008)

Phase 5 Bay Watershed Model
(2009-)

**...with
detailed
representation
of VA's local
watersheds**



Taking Responsibility for Load Reductions



What are the Target Pollutant Cap Loads for the Bay Watershed?

Current model estimates are that the states' Bay water quality standards can be met at basinwide loading levels of:

- 200 million pounds nitrogen per year
- 15 million pounds phosphorus per year

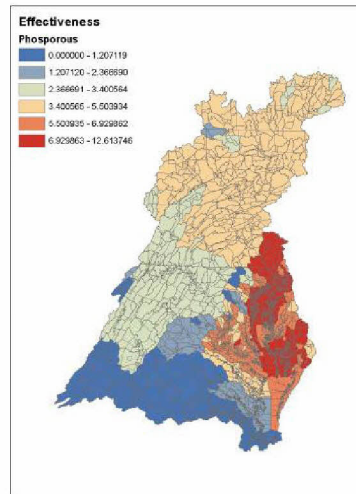
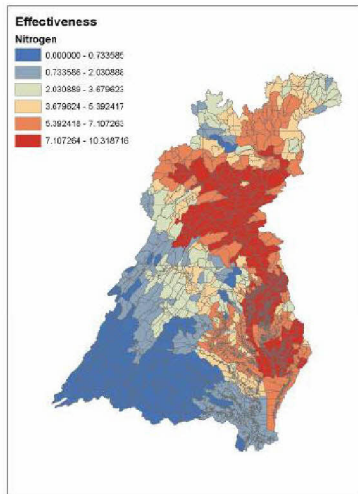
(Sediment target cap load under development-will be available by spring 2010)

Dividing the Basinwide Target Loading

Guidelines for Distributing the Basinwide Target Loads

- Water quality and living resource goals should be achieved.
- Waters that contribute the most to the problem should achieve the most reductions (on a per pound basis).
- All previous reductions in nutrient loads are credited toward achieving final cap loads.

Nutrient Impacts on Bay WQ



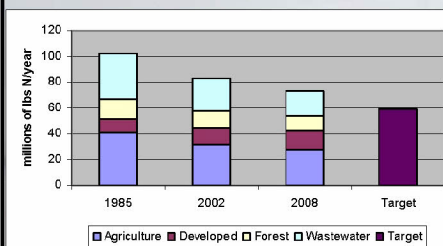
Current State Target Loads

Nitrogen			Phosphorus		
State	Tributary Strategy	Target Load	State	Tributary Strategy	Target Load
DC	2.12	2.37	DC	0.10	0.13
DE	6.43	5.25	DE	0.25	0.28
MD	42.37	41.04	MD	2.54	3.04
NY	8.68	10.54	NY	0.56	0.56
PA	73.48	73.64	PA	3.10	3.16
VA	56.75	59.21	VA	6.41	7.05
WV	5.93	5.71	WV	0.43	0.62
Total	195.75	197.76	Total	13.39	14.84

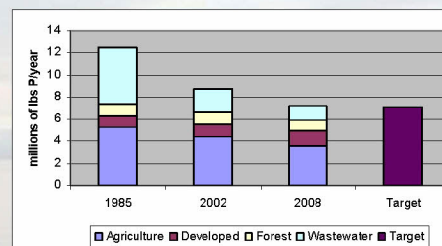
All loads are in millions of pounds per year.

Virginia's Past, Present and Future Estimated Loads

Nitrogen



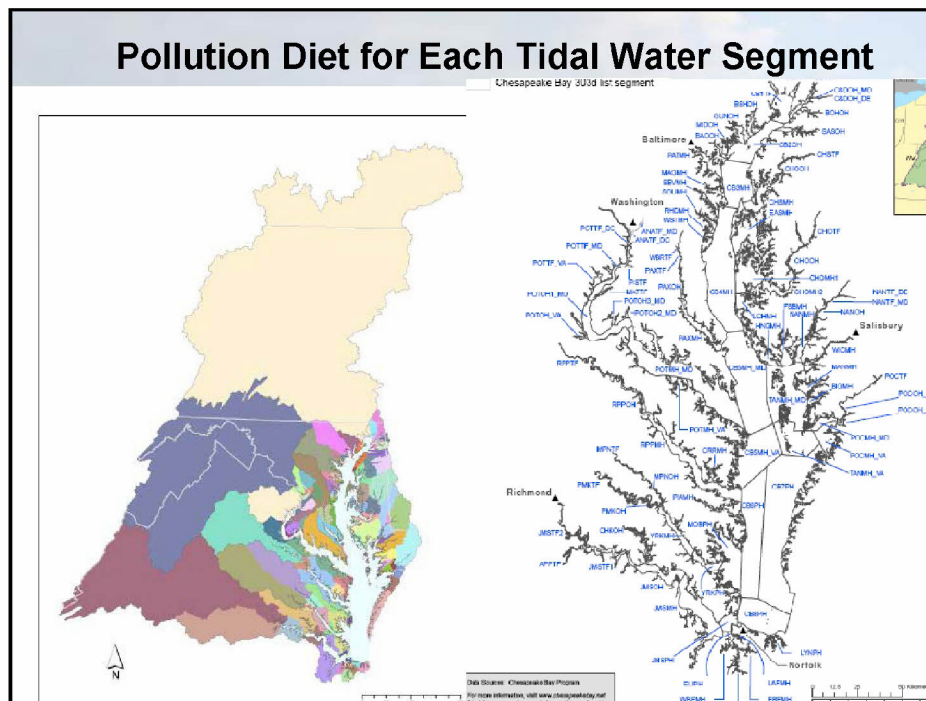
Phosphorus



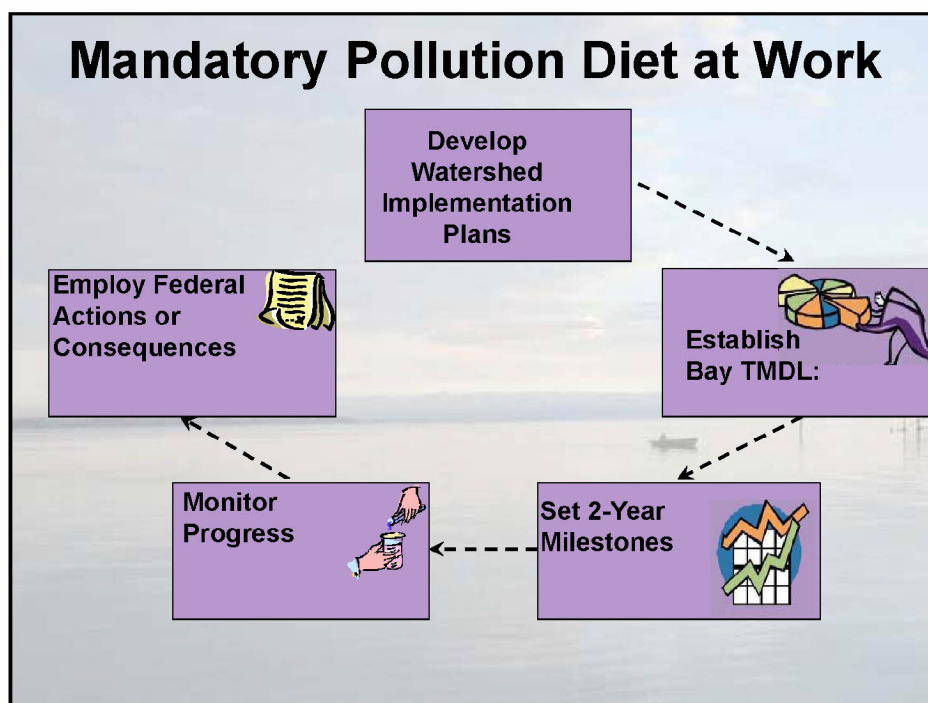
All scenarios run through Phase 5.2 Watershed Model

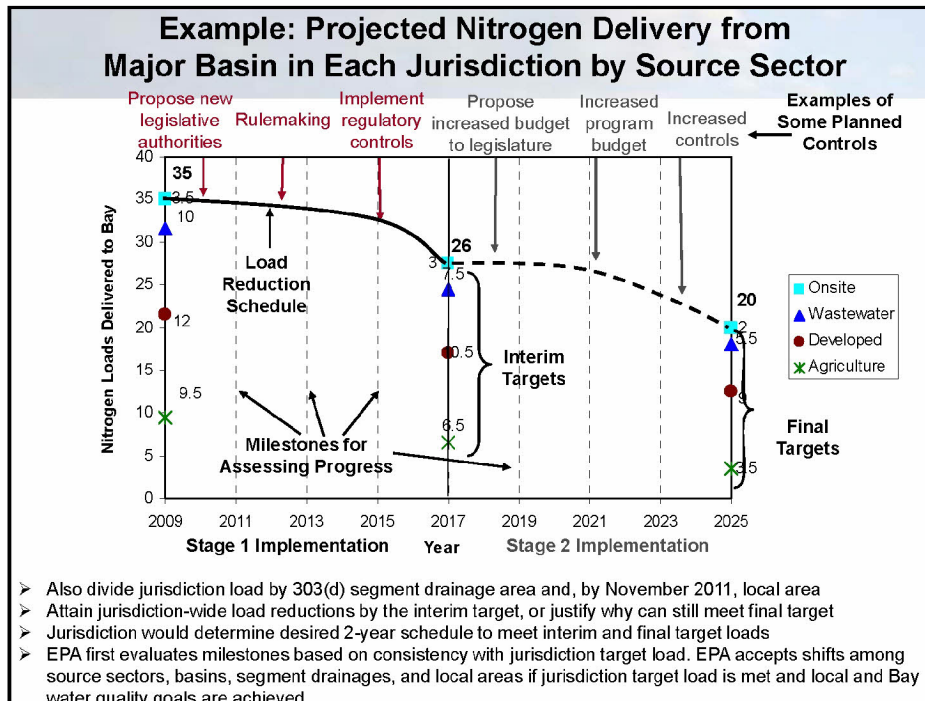
Target Load Refinements

- If States' Bay Water Quality Standards can still be achieved...
 - The State may exchange nitrogen and phosphorus target loads within a basin; and/or
 - The State may exchange nitrogen and phosphorus loads from one basin to another within the State.



The Chesapeake Bay Performance and Accountability System



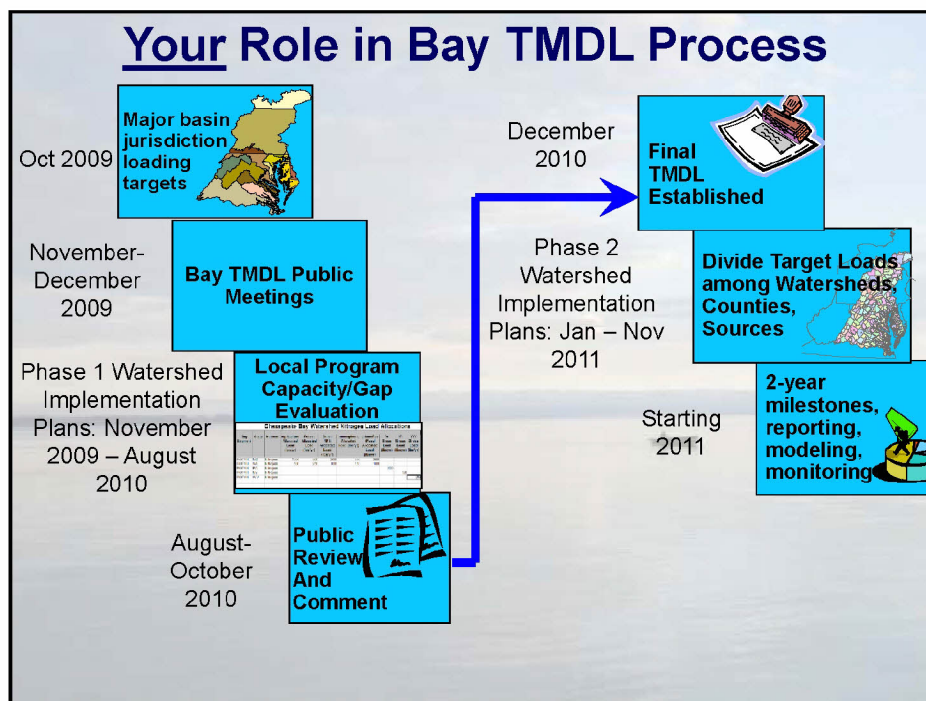


Federal Consequences

- Directed at states not achieving expectations
- Will be outlined in an EPA letter this fall. May include:
 - Assigning more stringent pollution reductions to regulated point sources (e.g., wastewater, stormwater, CAFOs)
 - Objecting to state-issued NPDES permits
 - Limiting or prohibiting new or expanded discharges (e.g., wastewater, stormwater) of nutrients and sediment
 - Withholding, conditioning or reallocating federal grant funds

Bay TMDL- Presidential Executive Order Connections

- Create Federal Leadership Committee
- Create the Performance and Accountability Framework
- Expand regulatory tools for CAFO's and urban and suburban runoff
- Improve nutrient and sediment controls on federal lands and roads
- Target farm conservation measures at high priority areas



Bay TMDL: Bottom-line

- Actions will clean and protect local waters in VA thereby supporting the local economy
- Restore a thriving Chesapeake Bay
- Federal, state, local officials and agencies will be fully accountable to the public
- Consequences for inaction, lack of progress





Further Information

- Chesapeake Bay TMDL web site
www.epa.gov/chesapeakebaytmdl
- U.S. EPA Region 3 Contacts
 - Water Protection Division
 - Bob Koroncai
– 215-814-5730; koroncai.robert@epa.gov
 - Jennifer Sincock (sincock.jennifer@epa.gov)
 - Chesapeake Bay Program Office
 - Rich Batiuk
– 410-267-5731; batiuk.richard@epa.gov
 - Katherine Antos (antos.katherine@epa.gov)



A Challenged Bay

- Loss of shellfish and finfish
- Habitat loss
- Annual dead zones
- Poor water clarity



Successes to Date

- Much has been done using voluntary, incentive based, and regulatory programs
- 1985 Loads
 - 102 million pounds Nitrogen
 - 12.4 million pounds Phosphorus
- 2008 Estimated Loads
 - 72.8 million pounds Nitrogen
 - 7.2 million pounds Phosphorus



The Challenge Ahead

- To meet water quality standards in the Chesapeake Bay and its tidal rivers, **there is more to do**
- Low hanging fruit – mostly gone
- Future reductions will be harder
- We all have a role

An aerial photograph of Virginia Bay, showing the coastline and surrounding land. The bay is a large body of water with a complex shoreline. The surrounding land is green, indicating vegetation. The bay is surrounded by land on three sides, with a narrow strip of land on the right side.

What We Need to Achieve (and Maintain)

Virginia Bay Draft Initial Target Loads

- 59.2 million pounds Nitrogen
- 7.05 million pounds Phosphorus
- These targets are very likely to change

An aerial photograph of Virginia Bay, showing the coastline and surrounding land. The bay is a large body of water with a complex shoreline. The surrounding land is green, indicating vegetation. The bay is surrounded by land on three sides, with a narrow strip of land on the right side.


Load Uncertainties

- Initial draft target loads provided by EPA based on dissolved oxygen only
- Impacts on target loads from water quality standards for bay grasses, water clarity and other localized issues not yet determined
- Will be spring 2010 before target loads are adjusted for these factors



Vision for Virginia's Watershed Implementation Plan

- Focuses on “how” as well as the “how much”
- Equity between sectors
- Is relevant locally
- Uses adaptive management



Actively engage stakeholders and the public

- Virginia Bay TMDL Webinar (October 2009)
- Initial EPA Public Meetings (December 2009)
- Go to Individual stakeholder meetings (2010)
- Stakeholder Advisory Group (early 2010)
- Use Interactive web-based tools (Ongoing)
- EPA Public Comment Period (Aug. – Oct. 2010)
- Additional outreach as necessary

A Challenging Timeframe

EPA deadlines:

Phase I – Draft allocations and state strategies

- June 1, 2010 - Preliminary phase I plan by source sector and impaired segment drainage area
- August 1, 2010 – Draft phase I plan
- November 1, 2010 – Final phase I plan

Phase II – Local target loads and action plans

- June 1, 2011 – Draft phase II plan
- November 1, 2011 – Final phase II plan submitted to EPA

Phase I – Draft Allocations by Source Sector and State Strategies

- State staff to consult with sector experts, then staff will develop projected BMP coverage levels
- Draft reviewed and refined following input by Stakeholder Group
- Used to derive potential nutrient and sediment load reductions and develop State strategies



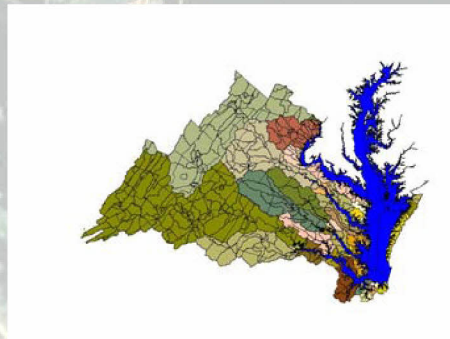
Phase I – Draft Allocations by Source Sector and State Strategies

Source Sectors

- Municipal and Industrial Wastewater
- Non-Significant Wastewater
- Municipal Combined Sewer Overflows [3 systems in VA]
- Industrial Stormwater
- Construction Stormwater
- MS4 Stormwater
- Non-MS4 Stormwater
- Confined Animal Feeding Operations (CAFOs)
- Agriculture – non CAFO
- Forest
- Atmospheric
- Onsite / septic systems

Phase I – Draft Allocations Made to Individual Watershed Segments

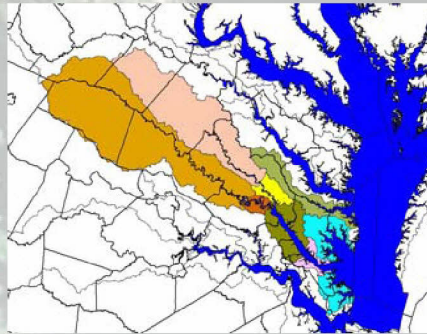
- State agency staff will distribute the allowable loads into the various impaired segments and among the various sources
- Land use data (cropland, developed land, etc.) along with BMP coverage projections and resulting load reductions will be used
- Draft reviewed and refined following input by Stakeholder Group



Virginia's 35 Bay Watershed Segments

Phase II - Local Target Loads and Action Plans

- Will work closely with local stakeholders to identify specific controls and practices to be implemented
- Agencies will initiate work later in 2010
- Due by November 2011



York River Segments and Jurisdictions

2-Year Milestone Process

- Biennial Milestones –Use adaptive management; identify specific actions needed to maintain schedule
- Continue to engage stakeholders and public
- Monitor and evaluate progress
- Next milestone period – January 1, 2012 to December 31, 2013 to be completed with phase II plan

Want to find out more?

EPA

<http://www.epa.gov/chesapeakebaytmdl/>

VA-DEQ

<http://www.deq.virginia.gov/tmdl/chesapeakebay.html>

VA-DCR

http://www.dcr.virginia.gov/soil_and_water/baytmdl.shtml



Questions & Comments



Thank you for your participation.



That concludes today's meeting.

Questions Answered

Questions Answered (in the order in which they were asked):

Note: The letter indicates the source of each question. An "A" indicates that the question was submitted by the live audience. The cards were pre-numbered to easily identify the question once they were submitted. These questions are in the order in which they were asked. Some questions were rewritten for clarity.

A95: What role will local governments play in enforcement of the TMDLs on the load caps?

A9: The Webinar held on 10/2/2009 showed pie charts listing atmospheric deposition for nitrogen pollution as 20% contribution from mobile, utilities, industries. The pie chart tonight didn't seem to address these sources. While nitrogen is indeed a pollutant of concern, mercury and other heavy metals as well as PM adsorb onto sediments or become sediment that ends up in the Chesapeake Bay. Are CAA permits being written to minimize pollution ending up in the Bay? (Linda Cole)

A6a&b: Why haven't 20 years of Virginia's Chesapeake Bay Preservation Act program implementation worked? How much more can reasonably be accomplished by lands and localities below the fall line? Especially when not seeing a whole lot of effort above the fall line and in major contributing areas (like PA)?

A16: What is the EPA going to do concerning on-site wastewater systems in Virginia- septic systems within 1000 feet of tidal waters as an example? How can we implement a Bay Preservation fund similar to Maryland? (Reed Johnson)

A4: I know what models were/are used to develop the TMDL, and I know how long ago the models were obtained/ compiled. I would like to know when current conditions are going to be used to develop TMDLs.

A31: You indicated that phosphorus targets are "likely to change," between now and final publication of the TMDL. Has there been a change in the water quality data, modeling approach or assignment method that is driving this change? If so, why is it that the current load targets are uncertain?

A3: How are TMDLs being developed? What models are being used and have they been verified? Once established, how will TMDL be measured in the future? For impairments, how are they defined, how often, and if measured once, do they ever change?

A110: Being that we have spent millions on cleaning up the Bay and we are monitoring the pollution, would the EPA consider stepping up and taking over or being an integral part of the Clean Air Act and the US Army Corps 401 & 404 permits for Old Dominion Electric Cooperative's 1500 MW conventional coal fired power plant? This would be the largest coal-fired power plant in the state. Thank you so very much for holding these meetings. With local government seeking additional revenues it seems as though the EPA may be our only hope. Thanks again.

A37c: How much funding and to which agencies will it go to implement President Obama's Executive Order?

A27: Do the 92 impairment TMDLs within the Chesapeake Bay include impairments for bacteria such as the Powhatan and Mill Creeks in James City County?

A8: Developing TMDL involves high level science such as using the models. We find inexperienced scientists doing such modeling generating flawed results. We have an example. How will you make sure no model mistakes happen? If there are experts willing to help, how could they contact you and help you? (Deva Borah, Woolpert, Inc.)

A26: Will the EPA have any role in preventing any new major point source polluters such as the huge coal plant proposed for just 18 miles from Williamsburg? (Christine Llewellyn)

A25: You have described a productive and fragile system in the Chesapeake Watershed. How does EPA view the introduction of a 1500 MW coal fired electric plant 10 miles from this room – that will emit 118 pounds of mercury and 3000 tons of nitrogen oxide every year? Thank you for coming to Williamsburg.

A20a: How will all best management practices (voluntary and cost share) on farms be reflected in the TMDL? There is an agreement that not all practices are being counted. Why does the TMDL need to be completed by 12/10 when the court order has a deadline of 05/11? A hurried process without accounting for all farm BMPs is impractical and inaccurate.

A96: Since EPA is establishing loading limits (caps) for the TMDL and one can expect population increases and land use change, won't the local/state TMDL implementation continually ratchet tighter in order to meet EPA's caps? In other words if Virginia meets its cap, won't Virginia have to continue increased reductions just to maintain any achievements?

A18a: Does the role that budget (federal and state) plays from year to year and administration changes affect accomplishment? In the past, many programs were funded and implemented only to be eliminated the next budget year or administration. One step forward, two back. How does this or these target strategies stay in place and move through transitions?

A18b: How do you account for major weather events (hurricanes) which are especially important when measures are made and consequences are assigned?

A23a: Under pollutants and possibly sediment, what effect do you see the TMDL having on mercury deposition?

A22: How will EPA ensure that potential future sources are included in the load allocations?

A19: What assurance is there that federal funding will be appropriate? What happens when funding is not available? What are the consequences when federal and state lands do not meet their own reductions? Why not require federal and state lands/waters to be cleaned up first and completely? What incentive programs do you propose for urban/suburban load reductions? In other words, are there carrots versus sticks? The consequences appear counter-productive – withholding funding/grants for programs that promote water quality. Please explain. How many more employees is EPA hiring to implement these goals that could be used more productively to help industries comply?

A103: Will state agencies (Virginia specifically) look beyond the traditional sources of pollutants for reductions like industry and utilities (atmospheric)? Will states like Virginia delay approval of major sources of pollution until after TMDL strategies are fully developed? (James Craig, Surry, VA)

A1: Restoration of Virginia's watersheds is a worthy goal, but if the EPA continues to ignore the prevention of pollution then we will continue to waste money to no effect. As you probably know the Commonwealth's Department of Conservation and Recreation disgraces itself last month by rescinding stormwater regulations that had been developed by experts over a three year period. The DCR, as you know, was operating under the authority delegated by the EPA, your agency. So, my question is, when will the EPA finally begin to enforce or cause their delegates to enforce the Clean Water Act? (Jack Haldeman)

A5: When PHII is implemented is there a federal or state grant program planned to help those localities that cannot afford it? How are the new stormwater regulations in Virginia going to impact our portion of the TMDL? It is hard enough for Virginia to meet our goals so it will be extremely hard on our northern neighbors. Are they going to achieve their goals? Is this going to work? What have they done up to now?

A59: Prior to implementation of the Chesapeake Bay Act the department of soil and water conservation suggested removing trees within 20 feet of shorelines to promote wetlands grass growth as a buffer. Now no trees are removed. The grasses die. The shoreline erodes, collapsing trees, which pulls up soils. People have to hire marine contractors to harden the shoreline which starves marshes are there. Is there common sense in the new regulations?

A39: As part of the framework for the TMDL regulations, will financial impacts be assessed? It should. Based on what has been published, there will be significant financial impacts to the state program, local program, development/agricultural community, and wastewater treatment plants. Will federal funding be available for assistance to the state and to localities?

A14: Why when EPA and DCR talk, they focus on land use and future development rather than the 400 years of existing development that has little or no treatment?

A106b: Does the EPA's strategy for meeting the TMLD targets involve any efforts to "retrofit" older, existing neighborhoods built before current stormwater standards and help them meet current standards?

A12: How do you determine where percentages come from for agriculture and urban areas?

Questions Submitted

Questions Submitted (but not answered):

A6c: What will force states that to date haven't done much to seriously and correctly address implementation now when it hasn't worked in the past?

A37a: HRSD as a regulated source already has to reduce its inputs of nitrogen and phosphorus – is it realistic to be able to squeeze more out of them and others?

A37b: Is Virginia getting a “consequences letter?”

A20b: When will compliance begin to be required? How do the states' two year milestones impact the TMDL?

A20c: What will happen when milestones cannot be achieved because funding/fiscal resources are absolutely not available (recognizing that states must balance their budgets)?

A20d: How are nutrients from wildlife accounted for?

A20e: How many businesses (farms and others) have to cease operations because of new regulations before the process is determined to be too draconian?

A20f: Will there be a trigger to stop enforcement when businesses fail or economic growth stalls?

A20g: Why is the Cardin/Cummings proposal legislation necessary to codify the TMDL when it is court order?

A23b: Old Dominion Electric Cooperative is threatening to place a 1500 MW coal-fired plant in Surry County. How could they 6,169,960 pounds of annual NOx emissions affect Virginia's goals? (Lisa Craig)

A106a: Given that in Virginia that 58% of the phosphorus load comes from agriculture and that 38% of nitrogen load come from agriculture, what mandatory measures will be placed on agriculture, such as buffers?

A24: How will the coal plant in Surry, Virginia affect the TMDL? Any chance the EPA can kill this plant? (Betsy Shepard)

A105: How do you see this plant, if approved, to affect the health of the Chesapeake Bay? What role can EPA play in affecting approval/disapproval of proposed plant? (Anne Allen)

A21: Why a coal plant and not a gas or nuclear plant?

Comments

The comments below have been paraphrased and are not a full transcription.

Reed Johnston – Territory manager for onsite wastewater (septic) systems that runs from Pennsylvania down to Virginia

Onsite septic systems contribute nitrogen to the bay. Think of all of the homes that are within 1,000 feet of tidal waters in Virginia. Nutrients from these onsite systems are an important part of the equation that need to be reduced. Maryland allows a tax of \$30 for every home owner that has a septic system. The money that is collected is for agriculture and onsite treatment systems that are within 1,000 feet of tidal waters. My modeling shows that 12 million pounds of nitrogen is from onsite septic systems. Do we really know how much nitrogen is contributed by septic systems? No. I support what EPA is doing and I hope that you will support a way to fund this. We can talk all day long, but where is the money going to come from? Maryland has found a way to help protect the Bay, how are we going to do that?

Jeanine Burns – Supervisor from Mathews Co.

Mathews County is a rural peninsula. Our county is at or near sea level and is 100% on well water and 95% on septic systems. We have a small sanitary district. Mathews County supports what EPA is doing and the board unanimously requested the re-authorization of the Clean Water Act by the state government in Richmond. One suggestion we have is to include the health departments. The health departments have fine individuals employed that effectively do nothing to regulate septic systems. With great encouragement, they'll send letters to septic owners, but the next penalty beyond the letter is a criminal charge and the health departments just are not willing to go there. There is no interim penalty between the letter and the criminal penalty.

We are concerned over the new regulations from July 1, 2008 that decided that there is no non-buildable land in Virginia. All land is buildable with an atypical wastewater system as long as an engineer signs off on the design. Personally, I would like to see a relaxation of Dillon rule. Allow a locality, based on its individual needs, to allow a locality to monitor and maintain systems to at least have the opportunity to try.

Comments below are by Christine Lewellyn

EPA TMDL meeting Williamsburg 12/15/09

My name is Christine Llewellyn. I am a resident of James City County, a physician and the Director of the Williamsburg Climate Action Network.

First, let me thank you for hosting these meetings all throughout the Chesapeake Bay states. After years of inadequate action on Bay cleanup, I am delighted for this very important step in the right direction and your openness for public input.

As a radiologist, I know a few things about the dangers of a substance that you can't see, smell, feel, hear or taste.

I am enormously concerned about the significant level of pollutants that the proposed huge coal fired power plant in Surry County will be pouring into an already fragile Bay, including thousands of tons of nitrogen and sulfur dioxide and 116 lbs of mercury, when 1300 miles of Virginia rivers and 40,000 acres of Virginia lakes are already contaminated by mercury.

This plant is also projected to emit 14.6 million tons of carbon dioxide, contributing to acidification of Bay waters and threatening restoration of native oysters, as well as contribute to sea level rise in an area second in vulnerability to sea level rise only to New Orleans in the U.S.

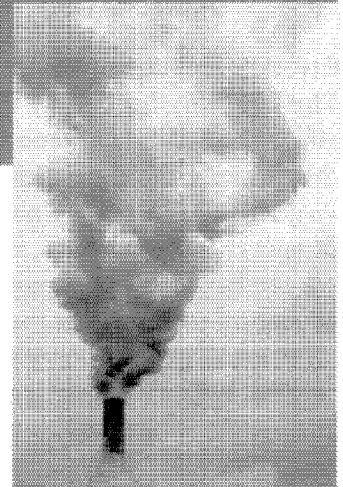
It is my sincere hope that the EPA will seriously look at the contribution to Bay degradation this proposed plant will make, and act accordingly.

Thank you.

SURRY COAL FIRED ELECTRIC PLANT A GOOD NEIGHBOR ?

In December 2008, Old Dominion Electric Cooperative announced their plan to build a 1500 megawatt coal fired electric plant in the town of Dendron, Surry County, Virginia.

If built, the Surry Plant would be the largest coal fired plant in Virginia, and it would be located within an area anxious to maintain its small town, rural character and near a major population area of 1.7 million people who live downwind from the pollution.



Why Should You Care ?

our health

Due to emissions of deadly fine particle soot, ozone smog pollution, and toxic mercury, Virginia ranks as one of the ten top most dangerous states to live in for power plant pollution. Those living within a 30 mile radius of a plant, especially children, experience the most serious effects. The Surry Plant will add yearly:

Fine particle pollution - 2,155 tons - causes increased asthma attacks, hospitalizations and shortens lives of about 990 Virginians each year.

Sulfur Dioxide - 3,685 tons - affects breathing, and may aggravate existing respiratory and cardiovascular disease.

Nitrogen Oxide - 3,085 tons - causes eye, nose and throat irritation at low levels and serious damage to the tissues of the upper respiratory tract, fluid build-up in the lungs and death at high exposure levels.

Ozone or smog pollution at low levels can cause coughing, wheezing, shortness of breath and chest pain. At higher levels it can cause lung tissue damage, reduced lung capacity and premature death.

Mercury - 118 lbs. - causes mental retardation, brain damage in the fetal stage, learning disabilities in children, and increases the risk of heart disease.

our environment

The ODEC Surry Plant would release **14.6^{million} tons of carbon dioxide annually**, and at present no commercially viable technology exists to capture CO2 emissions from the pulverized coal plant planned for Surry County.

Rising Coastal Waters. CO2 is the leading cause of climate change which increases sea-level rise in coastal Virginia - the second most vulnerable area in the U.S. Scientists predict a 1 to 2 foot rise for the Tidewater area in this century.

Water. According to the EPA, power plants are responsible for 41 percent of the total mercury emitted by all known sources. Approximately 1,300 miles of Virginia rivers and nearly 40,000 acres of Virginia lakes are already contaminated by mercury. The Surry Plant would be in an area adjacent to wetlands and the Blackwater River, near the James River and the Chesapeake Bay - all within the 60 mile radius where airborne mercury causes serious contamination. Nitrogen from power plants already accounts for more than 90 million pounds of pollution in the bay each year.

Coal Fly Ash. Numerous studies have shown that fly ash can leach toxic substances that cause cancer, birth defects, and other health problems.

Crops. Nitrogen oxide causes forest and crop damage. NASA released a report in May 2009 on the harmful effects of rising surface ozone concentrations on soybeans.

We need electricity and jobs. What are the alternatives ?

Electricity Alternatives

Energy Efficiency and Conservation

The 2007 Virginia Energy Plan concluded that energy efficiency and conservation measures can provide the quickest, most cost-effective ways to meet Virginia's future energy needs. With a combination of energy industry, state, and consumer investment, we can have the tax incentives and consumer education and to meet the established goal of reducing Virginia's energy consumption by 10 per cent by 2022. The American Council for an Energy Efficient Economy says that Virginia can meet 19 per cent of its electricity needs by moderate efficiency measures by 2025, allowing for growth. Energy efficiency and conservation can save ratepayers billions of dollars.

Wind Power. According to studies by the Virginia Coastal Energy Research Consortium, the shallow waters off our coast make Virginia one of the prime states for locating offshore wind capacity. Harnessing offshore wind could produce 20% of Virginia's electricity needs and accommodate existing ocean uses.

A Phase One development of 500 to 600 MW off Hampton Roads would create over 1000 high-skill

jobs while providing clean, sustainable energy at reliable and competitive costs. At present, several energy companies are considering sites for wind farms in southwest and coastal Virginia.

Biomass.

Biomass is plant matter such as forest product waste, grasses, and biological material such as algae that can be used for the production of electric power, fuels, and heat. The 2007 Virginia Energy Plan estimates 750MW potential from biomass. One of the largest biomass electric plants in the U.S. is an 80MW facility outside of Danville, Virginia.

Job Alternatives

According to a report issued by the Pew Charitable Trusts, Virginia in the past decade has realized nearly 17,000 clean energy economy jobs and attracted almost \$71 million in clean technology venture capital in the past three years.

The green energy economy creates more jobs and better jobs in more geographic areas of Virginia than does the coal fired electric power generation industry.

What can you do ?

Citizens can make a difference in the decisions on what form of energy is utilized to produce our electricity. Coal has been a cheap choice, but it is not cheap if you remove the subsidies and add in the health costs.

- Educate your family, friends, community.
- Write to you local newspaper, TV and radio.
- Contact your local officials.
- Contact your state officials and legislators.

Tell them about your choice.

Sources

Pollution statistics: Old Dominion Electric Cooperative
Sea level rise: www.nwf.org/globalwarming/pdfs/Virginia.pdf
Mercury: www.epa.gov/mercury/control_emissions/index.htm
Water: www.cbf.org/Page.aspx?pid=1141
Fly ash: New York Times, 1/7/2009
Crop damage: www.nasa.gov/centers/langley/news/researchnews/soybeans.html
2007 Virginia Energy Plan: www.governor.virginia/TempContent/2007VA_Energy_Plan-Full_Document.pdf
Efficiency-ACEEE: wiseenergyforvirginia.org/downloads/vaaceee.pdf
Wind: www.vccrc.org
Jobs: www.pewglobalwarming.org/cleanenergyeconomy/Virginia.html
Other Sources: Clean Air Task Force: www.catf.us
American Lung Association: www.lungusa.org
Physicians for Social Responsibility: www.psr.org
Wise Energy for Virginia: wiseenergyforvirginia.org